

**SHOW-THROUGH COMPENSATION APPARATUS AND METHOD****ABSTRACT**

5

Apparatus and methods that adjust image data for show-through image information of an image on a front side of an image bearing substrate having image data on a back side and on an adjacent side of a backing substrate, e.g., the pages of a bound volume. Image data for a front side image, a back side image and an adjacent side image is obtained from an optical sensor that senses light reflected from the image bearing substrate. The image data is stored in a memory and is used to determine scanned density data and approximate absorbency data for the respective sides of the substrates. Show-through compensated density data for the front side image is computed by filtering the absorbency data for the back and adjacent side with a filter characteristic of the show-through characteristics of the image bearing substrate and subtracting this filtered absorbency data from the front side scanned density data. If required, the show-through compensated density data for the front, side image is converted into a show-through compensated reflectance image.